October 2017 1 of 9

## 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
Austria	Ammonium paratungstate	St. Martin im Sulmtal, Styria	Wolfram Bergbau und Hütten AG (Sandvik AB, 100%)
Brazil	Ferrotungsten	Araçariguama, São Paulo	ACL Metais Ltda
Brazil	Ferrotungsten	Bom Jesus dos Perdões, São Paulo	Boreste Ligas Ltda
Brazil	Ferrotungsten	São Bernardo do Campo, São Paulo	Giro Metais Industria e Comercio Ltda
China	Ferrotungsten		Anhua Tiangong Jinyuan Alloy Materials Co., Ltd.
China	Ammonium paratungstate	Chengguan Town, Chaling County, Zhuzhou, Hunan	Chaling Dadi Tungsten Co., Ltd.
China	Ammonium paratungstate	Chenzhou, Hunan	Chenzhou Diamond Tungsten Products Co., Ltd.
China	Ammonium paratungstate	Luanchuan County, Luoyang City, Henan	China Molybdenum Co., Ltd.
China	Ammonium paratungstate	Chongyi County, Ganzhou, Jiangxi	Chongyi Zhangyuan Tungsten Co., Ltd.

October 2017 2 of 9

# 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
China	Ferrotungsten		Chuantou Emei Ferroalloy [Sichuan Chuantou Emei Ferroalloy (Group) Co., Ltd.]
China	Ammonium paratungstate	Xincheng Industrial Park, Dayu County, Ganzhou, Jiangxi	Dayu Jincheng Tungsten Industry Co., Ltd.
China	Ammonium paratungstate	Dayu Smelting Plant, Nan'an Town, Dayu County, Ganzhou, Jiangxi	Dayu Weiliang Tungsten Co., Ltd.
China	Ammonium paratungstate		Dongtai Huihuang Tungsten & Molybdenum Product Co., Ltd.
China	Ferrotungsten		Ferro-tungsten Co. [Hunan Chuangda Vanadium Tungsten Co., Ltd. (HCVT)]
China	Ammonium paratungstate	Longyan Industry Region, Xinluo District, Longyan City, Fujian	Fujian Jinxin Tungsten Co., Ltd.
China	Ammonium paratungstate		Fujian Minmetals Jinjiang Nonferrous Metals Co., Ltd.
China	Ammonium paratungstate	South Industrial Park, Ninghua County, Jinjiang, Fujian	Fujian Ninghua Jinjiang Tungsten Co. Ltd.
China	Ammonium paratungstate	Gan County, Ganzhou City, Jiangxi	Ganxian Shirui New Material Co., Ltd.

October 2017 3 of 9

# 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
China	Ammonium paratungstate	Xincheng, Jiangxi	Ganzhou Haichuang Tungsten Industry Co., Ltd. [Ganzhou Tejing Tungsten & Molybdenum Co., Ltd. (GZTJ)]
China	Ammonium paratungstate	Ganzhou, Jiangxi	Ganzhou Huaxing Tungsten Products Co. Ltd. [Jiangxi Tungsten Industry Group Co. Ltd. (JWYX) [joint venture between China Minmetals and Jiangxi Rare Earth and Rare Metals Tungsten Group Corp. (JXTC)]]
China	Ferrotungsten	Meilin Town, Gan County, Ganzhou City, Jiangxi	Ganzhou Jiangwu Ferrotungsten Co. Ltd. [Jiangxi Tungsten Industry Group Co. Ltd. (JWYX) [joint venture between China Minmetals and Jiangxi Rare Earth and Rare Metals Tungsten Group Corp. (JXTC)]]
China	Ammonium paratungstate	Ganzhou, Jiangxi	Ganzhou Seadragon W & Mo Co., Ltd. (Ganzhou Grand Sea W & Mo Group Co., Ltd.)
China	Ammonium paratungstate	Huichang County, Junmenling Town, Ganzhou City, Jiangxi	Ganzhou Yatai Tungsten Co., Ltd.
China	Ammonium paratungstate	Guantang Industrial Zone, Chao'an County, Chaozhou, Guangdong	GuangDong XiangLu Tungsten Co., Ltd. (Chaozhou Xianglu Tungsten Industry Co., Ltd.)
China	Ammonium paratungstate	Ganzhou, Jiangxi	H.C. Starck Jiangwu Tungsten Specialties (Ganzhou) Co., Ltd. [H.C. Starck GmbH and Jiangxi Rare Metals Tungsten Holdings Group Co. Ltd. (JXTC)]

October 2017 4 of 9

# 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
China	Ammonium paratungstate	Shanhu Town, Zhongshan County, Hezhou, Guangxi	Hezhou Pinggui PGMA Shanhu Wolfram Products Co. Ltd. [CNMC (Guangxi) PGMA Co. Ltd. (China Nonferrous Metal Mining (Group) Co., Ltd.)]
China	Ammonium paratungstate	Guanzhuang Town, Yuanling County, Huaihua, Hunan	Hunan Chenzhou Mining LLC (Hunan Gold Corp. Ltd.)
China	Ammonium paratungstate	Xintang Town, Hengdong County, Hengyang, Hunan	Hunan Chunchang Nonferrous Metals Corp.
China	Ferrotungsten	Anhua County, Hunan	Hunan Litian Century Mining Co., Ltd.
China	Ammonium paratungstate	Huanglong Industrial Park, Huanglong Town, Dayu County, Ganzhou, Jiangxi	Jiangxi Dayu Longxintai Tungsten Co., Ltd.
China	Ammonium paratungstate	New Century Industrial Park, Tong Cheng Dong Da 1, Gao'an, Jiangxi	Jiangxi Minmetals Gao'an Non-ferrous Metals Co., Ltd.
China	Ammonium paratungstate	Tonggu, Yichun, Jiangxi	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd. [Jiangxi Rare Metals Tungsten Holding Group Co., Ltd. (JXTC)]
China	Ammonium paratungstate	Dingnan County, Ganzhou, Jiangxi	Jiangxi Xinsheng Tungsten Industry Co., Ltd. [Jiangxi Rare Metals Tungsten Holding Group Co., Ltd. (JXTC)]
China	Ammonium paratungstate	Wudu Industrial Park, Xiushui County, Jiangxi	Jiangxi Xiushui Ganbei Tungsten Industry Co., Ltd. (China Minmetals Nonferrous Metals Holding Co., Ltd.)

October 2017 5 of 9

## 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
China	Ammonium paratungstate		Jiangxi Xiushui Xianggan Nonferrous Metals Co., Ltd.
China	Ammonium paratungstate	Changlong Town, Chongyi County, Ganzhou, Jiangxi	Jiangxi Yaosheng Tungsten Co., Ltd.
China	Ammonium paratungstate	Langfang Tungsten & Molybdenum Material Plant, Langfang, Hebei	Langfang (Torch) Huaying Tungsten & Molybdenum Industry Co., Ltd.
China	Ammonium paratungstate	Qiancun, Heyu Town, Luanchuan County, Luoyang, Henan	Luoyang Mudu Tungsten & Molybdenum Technology Co., Ltd.
China	Ammonium paratungstate	Xiagou Industry Region, Xigong District, Luoyang, Henan	Luoyang Yongzhuo Tungsten & Molybdenum Material Co., Ltd.
China	Ammonium paratungstate	Nanfeng Xiaozhai, Yunnan	Malipo Haiyu Tungsten Co., Ltd. [Xiamen Tungsten Co., Ltd. (XTC)]
China	Ferrotungsten		Minmetals (Hunan) Ferroalloys Co. Ltd. (China Minmetals Corp.)
China	Ammonium paratungstate	Ninghua County, Sanming City, Fujian	Ninghua Fuyan Mineral Products Co., Ltd.
China	Ferrotungsten		Sinosteel Jilin Ferroalloy Corporation Ltd. (Sinosteel Corp.)

October 2017 6 of 9

## 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
China	Ammonium paratungstate	Hengyang City, Hunan	South-East Nonferrous Metal Company Ltd. of Hengyang City (China National NonFerrous Metals Imp. & Exp. Jiangxi Corp. Ltd.)
China	Ammonium paratungstate	Dapu Industrial Park, Hengdong County, Hunan	Tungsten-cobalt Co. [Hunan Chuangda Vanadium Tungsten Co., Ltd. (HCVT)]
China	Ammonium paratungstate	Wendeng District, Weihai, Shandong	Wendeng Zhengxing Tungsten Industry Co., Ltd.
China	Ammonium paratungstate	Haicang District, Xiamen, Fujian	Xiamen Jia Lu Metal Industry Co., Ltd. [Xiamen Tungsten Co., Ltd. (XTC)]
China	Ammonium paratungstate	Haicang District, Xiamen, Fujian	Xiamen Tungsten (H.C.) Co., Ltd. [Xiamen Tungsten Co., Ltd. (XTC)]
China	Ammonium paratungstate	Xinfeng County, Ganzhou City, Jiangxi	Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.
China	Ammonium paratungstate	Guihua Village, Renhua County, Shaoguan, Guangdong	Xinhai Rendan Shaoguan Tungsten Co., Ltd.
China	Ammonium paratungstate	Sanxing Industrial Park, Rucheng County, Chenzhou City, Hunan	Zhongxiang Tungsten Co., Ltd.
China	Ammonium paratungstate	Zigong, Sichuan	Zigong Cemented Carbide Co., Ltd. (China Minmetals Corp.)

October 2017 7 of 9

# 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
Germany	Ammonium paratungstate	Goslar, Lower Saxony	H.C. Starck GmbH
India	Ammonium paratungstate	Sinnar, Nashik, Maharashtra State	SRP Tungsten Pvt. Ltd. (SRP Electronica Group)
Japan	Ammonium paratungstate	Akita, Akita	Japan New Metals Co. Ltd. (Mitsubishi Materials Corp. and Ryoko Sangyo Corp.)
Korea, Republic of	Ferrotungsten	Gyeongju, Gyeongbuk Province	Woltech Korea Co., Ltd.
Russia	Ammonium paratungstate	Nalchik, Kabardino-Balkariya Republic	OAO Gidrometallurg [also known as JSC Hydrometallurg (ZAO Wolfram)]
Russia	Ammonium paratungstate	Kirovgrad, Sverdlovskaya Oblast	OAO Kirovgrad Hard Alloys
Russia	Ammonium paratungstate	Vladikavkaz, North Ossetia Republic	OAO Pobedit (ZAO Wolfram controlling share)
Russia	Ferrotungsten plant	Unecha, Bryansk Oblast	Unecha Refractory Metals Plant (ZAO Wolfram)
United States	Ammonium paratungstate	Towanda, Pennsylvania	Global Tungsten & Powders Corp. (Plansee Group)

October 2017 8 of 9

# 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
United States	Tungsten carbide	Fallon, Nevada	Kennametal Inc.
United States	Ammonium paratungstate	Huntsville, Alabama	Kennametal Inc.
United States	Ammonium paratungstate	Depew, New York	Niagara Refining LLC [Sumitomo Electric Carbide, Inc. (Sumitomo Electric Industries, Ltd.) and New York Tungsten L.L.C. (Buffalo Tungsten Inc.)]
Uzbekistan	Ammonium paratungstate	Chirchiq, Tashkent Province	Almalyk GMK [formerly operated by Uzbek Refractory and Heat-Resistant Metals (OJSC "UzKTJM")]
Vietnam	Ferrotungsten	Tan Tien Industrial Zone, Vinh Bao District, Hai Phong	ATC Ferrotungsten Project [Asian Tungsten Products Co. Ltd. (ATC Alloys Ltd.)]
Vietnam	Ammonium paratungstate	Dai Tu District, Thai Nguyen Province	Nui Phao H.C. Starck Tungsten Chemicals Manufacturing LLC [Nui Phao Mining Company Ltd. (Masan Group) and H.C. Starck GmbH]
Vietnam	Ammonium paratungstate	Nhon Trach District, Dong Nai Province	Sanher Tungsten Vietnam Co. Ltd.
Vietnam	Ammonium paratungstate	Trang Bang District, TayNinh Province	Tejing (Vietnam) Tungsten Co., Ltd.

October 2017 9 of 9

## 3—Identified global consumers of tungsten concentrates

COUNTRY	PRODUCTS	LOCATION	OPERATOR / OWNERSHIP
Vietnam		Cailan Industrial Zone, Halong City, Quang Ninh	Vietnam Youngsun Tungsten Industry Co. Ltd. (HongKong Wolfram International Investment Co., Ltd.)